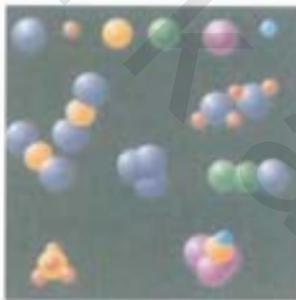


PRE-READING

Look at the pictures and read the title of the lesson.

1. Circle your answers about pictures 1 through 5. Write them on the lines.
- a) Picture 1 shows some air _____ (grains / molecules)
 b) Picture 2 shows some molecules _____ (in space / on the ground)
 c) In picture 3 Earth has the _____ level of gravity. (lowest / highest)
 d) Picture 4 shows the _____ from outer space. (earth / moon)
 e) Picture 5 shows _____ space. (inner / outer)

Picture 1



Picture 2



Picture 3



Picture 4



Picture 5



2. Read these statements about pictures 1–5 above. Tick (✓) Yes or No.

STATEMENTS	Yes	No
a) The molecules in picture 1 are multi-coloured.		
b) Picture 2 shows the sun in orbit.		
c) Mars has the lowest level of gravity in picture 3.		
d) Picture 4 shows the moon.		
e) Picture 5 shows the Milky Galaxy.		

READING TEXT

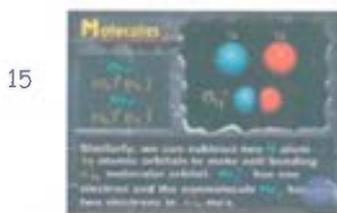
Read these three sentences and write the correct ones on the lines in the text.

- a) This constant contact of the molecules is called pressure.
- b) The answer is that gravity holds the air close to the earth.
- c) For example, many people thought that numbers like seven or thirteen had magical powers for good or bad luck.

PRESSURE AND MOLECULES

5 We have come a long way since ancient times, when many people regarded science as mysterious. _____

_____ Nowadays, for instance, scientific calculations tell us that light travels at a speed of 186,000 miles per second. Modern science teaches us that bacteria are invisible to the naked eye. It also teaches us that several hundred thousand bacteria could fit on the 'full stop' at the end of this sentence.

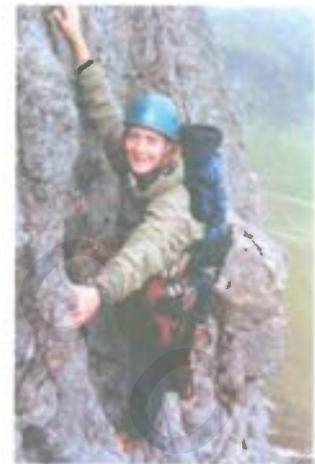


15 Recent scientific discoveries are very important to life. Scientists can use them to improve the quality of our lives. Look at the world around you in your house, in your car, in the University, or even around your body. Everything around us is made of small groups of atoms which form molecules. One example is gas. In gases, the molecules move about bumping into each other and into any surface they touch. _____

20 Gases expand; and air is one type of gas on earth. You may ask yourself why our air does not escape into outer space. _____

25 The higher you go, the thinner air becomes until it gradually disappears into space. Because air is so thin at very high distances from the ground, such as the Himalaya Mountains, climbers take oxygen to help them breathe.

30 Another example is going up in an elevator or airplane where you can feel your ears popping. As the air gets thinner, the number of molecules 'hitting' inside exceeds the number 'hitting' outside.



VOCABULARY & UNDERSTANDING

1. Match the words in column A with the words in column B. Write the phrases on the lines.

A	B	
1. seven or thirteen	speed	_____
2. Breathe	gas	_____
3. 186,000 miles per second	oxygen	_____
4. Air	numbers	_____

2. Use the phrases you wrote on the lines above to complete the paragraph below.

Many ancient people believed science to be mysterious. For example, people in many countries thought that _____ like _____ or _____ had magical powers for good or bad luck. Nowadays, for instance, scientific calculations tell us that light travels at a _____ of _____. Now we know that gases expand; and that _____ is one type of _____ on earth. Air is very thin at very high distances from the ground, such as the Himalaya Mountains, and that is the reason why climbers take _____ to help them _____.

3. Draw arrows (→) to match the descriptions within the ovals with the correct pictures.

Picture 6



A plane taking off

A plane landing

A plane in mid air

Picture 7



Picture 8



COMPREHENSION CHECK

1 Answer these questions based on the Reading text.

a) What did ancient people in many countries think of numbers like seven and thirteen?

b) How do molecules move about in gases?

c) What happens to air when you climb high mountains such as the Himalaya?

2. Meanings of words and expressions in the Reading text.

a) What does the word 'when' on line 4 refer to?

b) What does the word 'them' at the beginning of line 14 refer to?

c) What does the word 'where' on line 31 refer to?

LANGUAGE FOCUS - Sentence Structuring

1. Read the sentences below and circle the correct word (**many/much**).

- a) (**Many/much**) people regarded science as mysterious in ancient times.
- b) People in (**many/much**) countries thought that some numbers had magical powers.
- c) This is too (**many/much**) work for one person to do.
- d) Not (**many/much**) students from the University attended the Second Open day this month.
- e) Not (**many/much**) people could understand (**many/much**) of what you said.

2. This sentence "The higher you go, the thinner air becomes." is from the Reading text. It means:

- a) whenever air becomes thinner, you go higher;
- b) you go higher each time air becomes thinner;
- c) each time you go higher, air becomes thinner.

3. Now change each of these sentences into a different sentence using the structure in '2' above.

a) If your telescope is bigger, then you can see farther.

b) If fat people eat more food than they need, they become fatter.

c) Each time you add sugar to your tea, it becomes sweeter.

4. Now use the space below to write a sentence of your own similar to the one in '2' above.

Your sentence -

